

# Service Document

**STF 72-1010/7 Text**

**GBF2500**

GRUNDIG

## Service Manual

Sicherheit  
Safety

Materialnr./Part No.  
720108000001



Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual „Sicherheit“, Materialnummer 720108000001, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



The regulations and safety instructions shall be valid as provided by the „Safety“ Service Manual, part number 720108000001, as well as the respective national deviations.

Dieses Service Dokument ist nur in Datenform verfügbar

This Service Document is only available as data

Materialnummer / Part Number 720130000400

Änderungen vorbehalten/Subject to alteration

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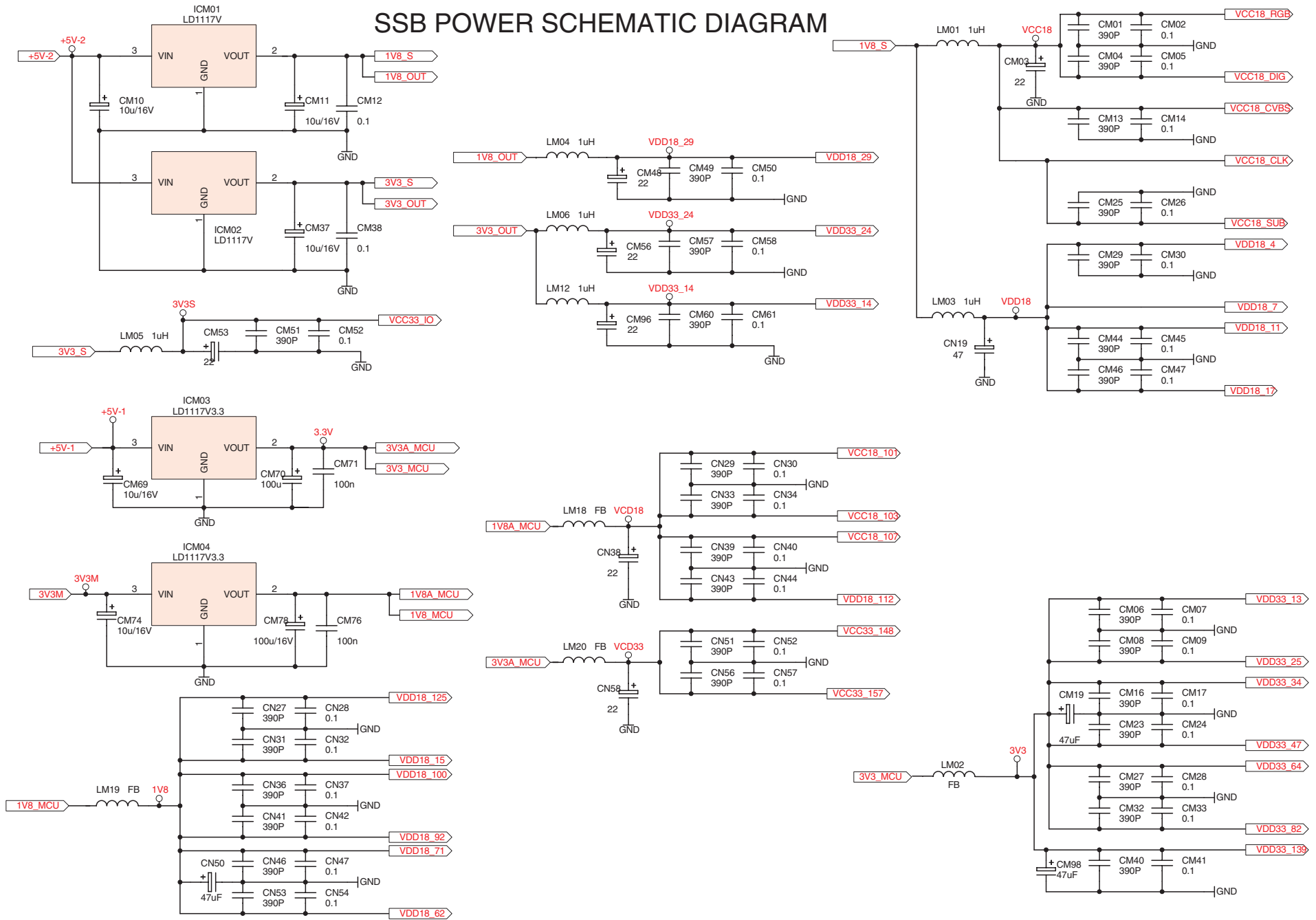


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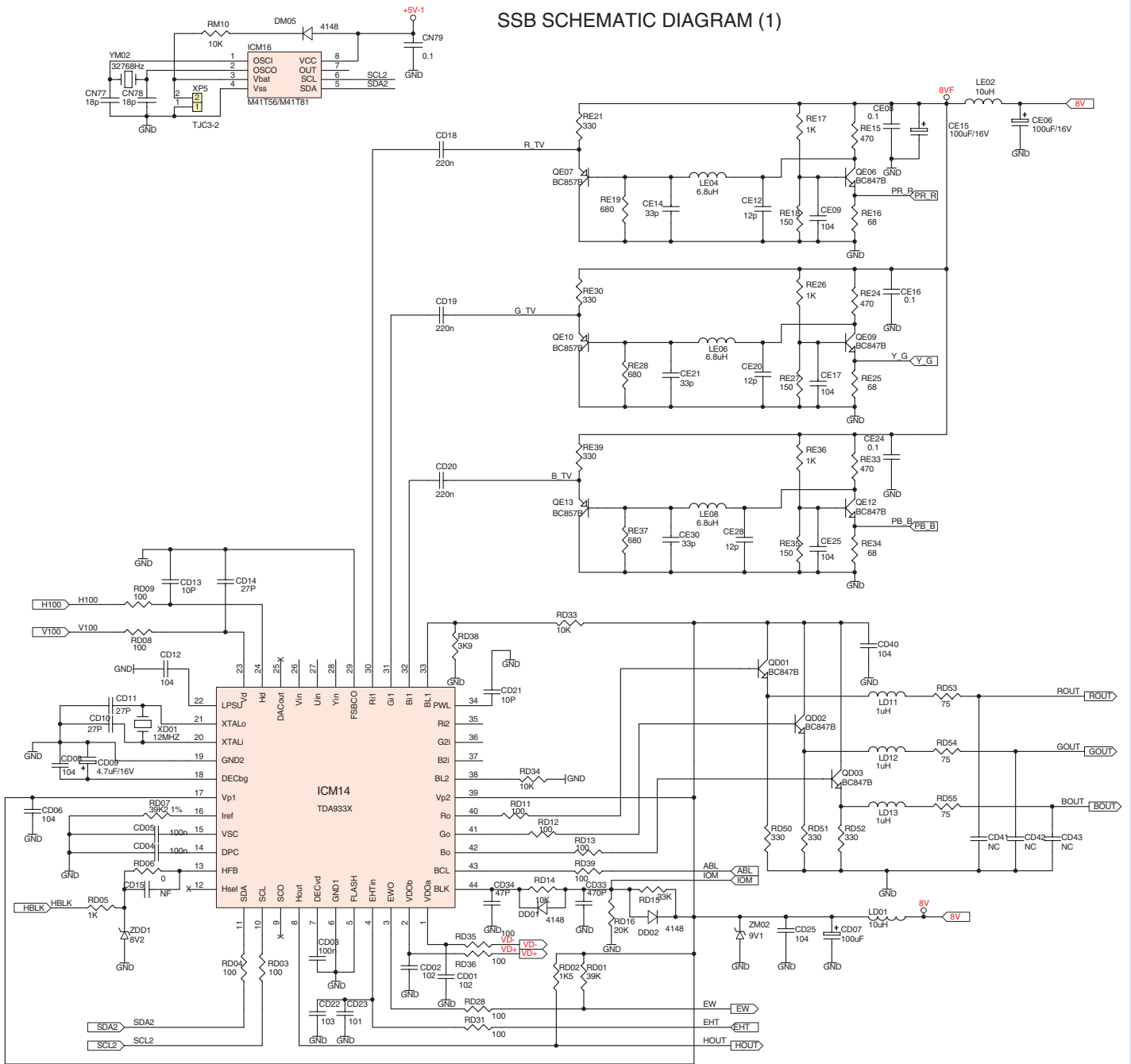




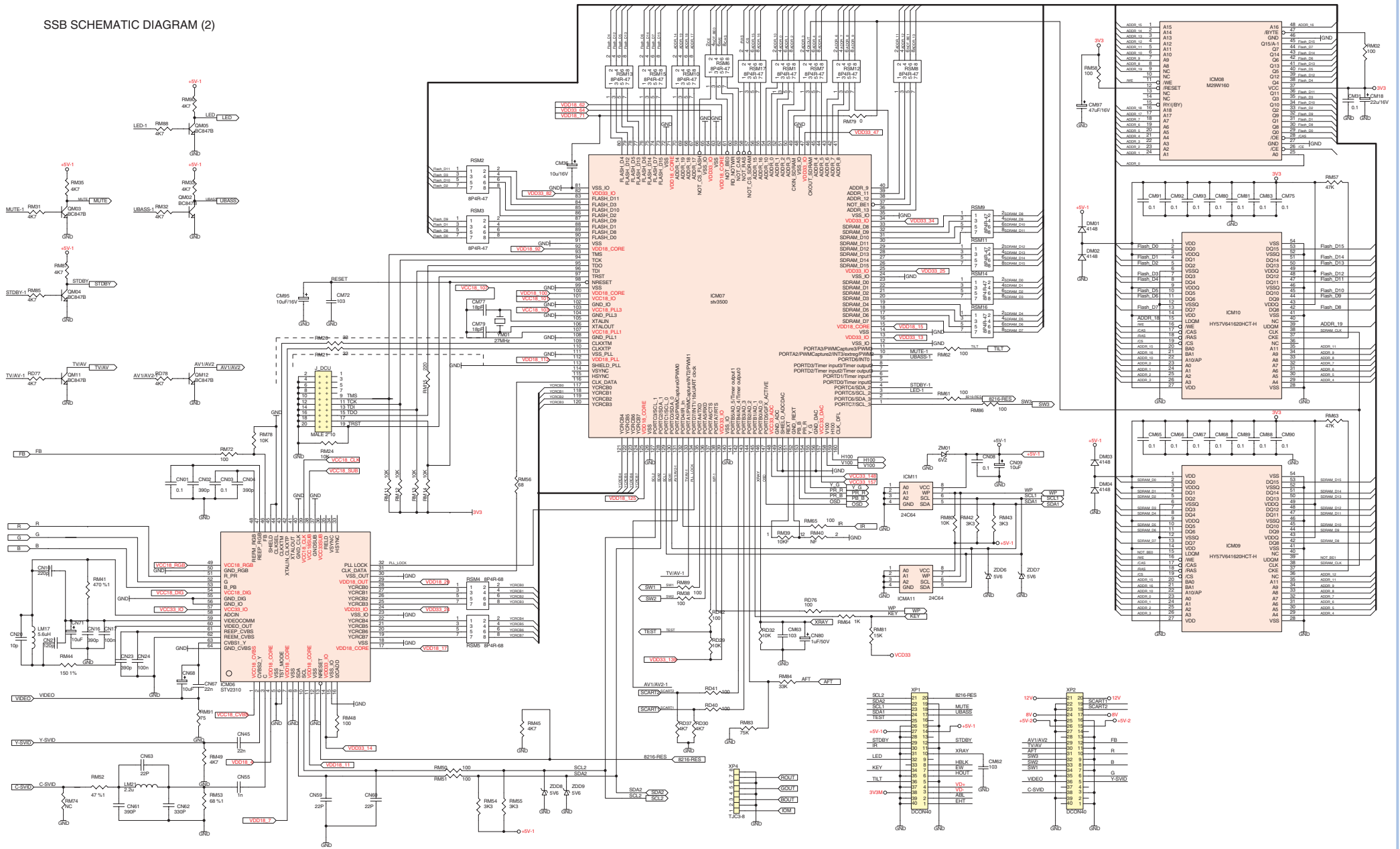
## SSB POWER SCHEMATIC DIAGRAM



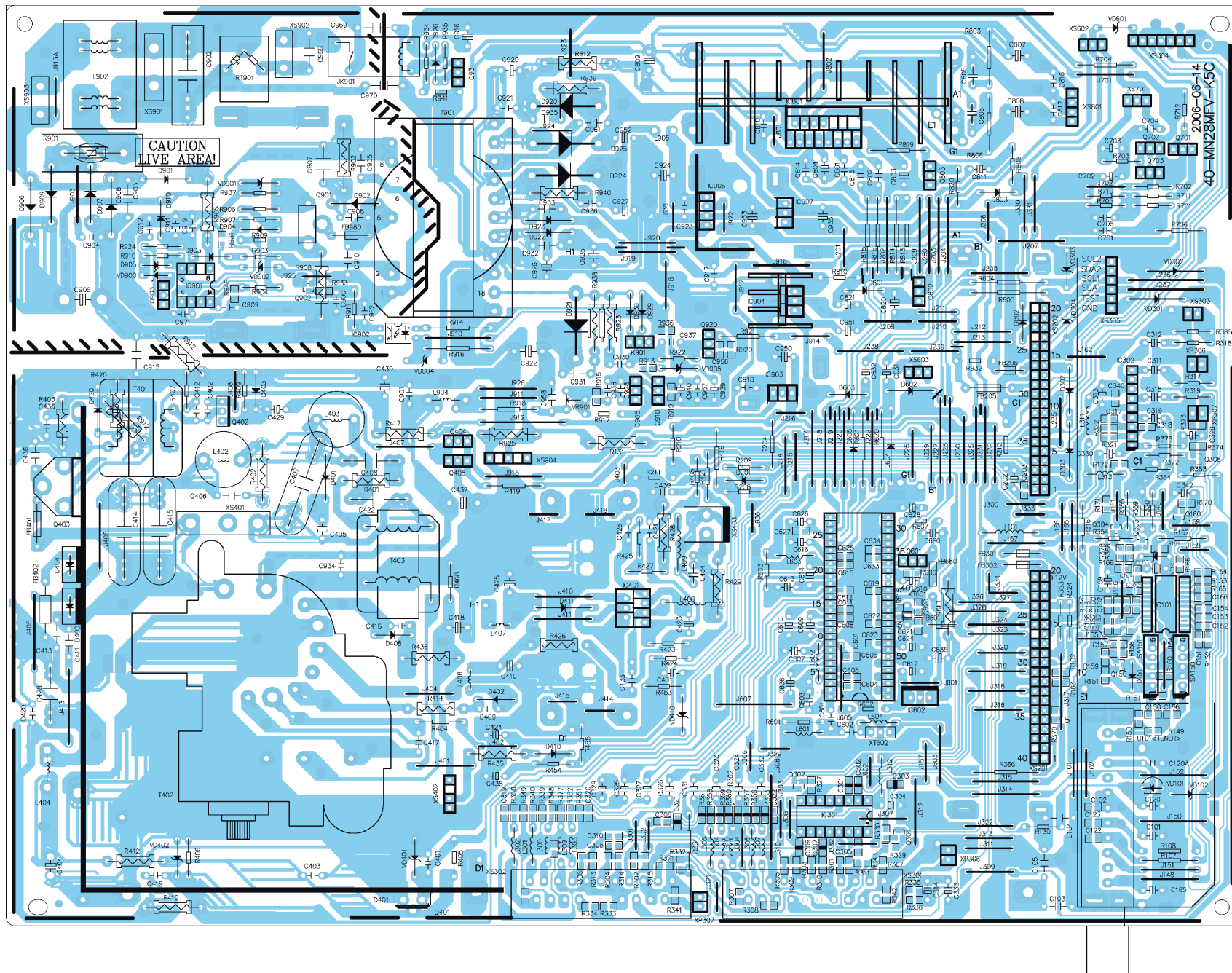
## SSB SCHEMATIC DIAGRAM (1)



SSB SCHEMATIC DIAGRAM (2)













## SPECIFICATION

SYSTEM..... PAL,SECAM, B/G, D/K NIACAM STEREO  
POWER INPUT .....AC 170-260V(50/60Hz)  
POWER CONSUMPTION..... 120W  
AERIAL IMPEDANCE .....75 OHM UNVALANCED  
TUNER ..... VOLTAGE SYNTHESIZER TUNING  
RECEIVING CHANNELS ..... VHF-L E2-S10  
..... VHF-H E5-S41  
..... UHF E21-E69  
PROGRAMME.....MAX.255 PROGRAM MEMORIES  
PICTURE TUBE .....29"  
SOUND OUTPUT.....>5W  
AV JACKS ..... 2 FULL SCART, SIDE RCA INPUT

## Chassis Adjustment:

### General description of method to enter into SERVICE MENU and ADJUST MENU:

- Turn on the Main Power Switch, then press "FACTORY" key about 3 seconds on the handset (service remote unit, please refer to the attached drawing). The "HPS ----- Geometry Adjust" will be displayed on the screen: When receiving signal is 50Hz, the "100i" will be displayed under the "Geometry Adjust", otherwise, when receiving the 60Hz signal, the "60P" will be displayed instead of "100i".
- Use volume "+" and "-" keys to adjust the parameter.
- Pressing channel "P+" and "P-" key select other items;
- On Geometry Adjust mode, refer to the follow table 1 to find adjustment items.
- Press "FACTORY" KEY again, The "RCUT -----White Balance" will be displayed on the screen:
- On White Balance mode, refer to the follow table1 to find adjustment items.
- Repeat the above step and
- press "FACTORY" KEY to exit the adjustment menu.

### B+ adjustment:

- Receive standard colour bar signal.
- Press key "PP." to select "NORMAL" mode.
- Connect digital voltmeter between of C922 and GND.
- +B voltage:

CRT BRAND	CRT TYPE	B+ (C922)
THOMSON	A68ELM021x121	133.0V

Connect the DC digital voltmeter to the C922 on main PCB. Receiving the Color bar signal, and press the P.P button to select "Normal" status. Adjust the VR901, to make the reading of the DC digital voltmeter as above table.

### IC901 power check:

- Connect probe of oscillograph to C911+ and GND;
- The read-out voltage on oscillograph must be directly voltage, the value should be 10.5~15VDC.

### STAND-BY power supply check

- Connect the digital voltmeter between C924 and GND;
- Press power key on remote unit to make sure the TV is on standby mode;
- The read-out on the digital voltmeter must be 8.0~10VDC

### Adjustment for RF AGC:

- Receive RF signal (62±3dBμV).
- Press factory key to enter Geometry Adjust MENU.
- Press "1" keys on the remote handset and on-screen display will be shown as following:  
AGC      Geometry Adjust  
XX      100i
- Press volume "+" or "-" on the remote handset to change the value of RF AGC until snow noise on the screen just disappears.
- Press "FACTORY" key to exit.

## Set Adjustment

### The Geometry adjustment:

Input the 50Hz signal, and entering the Factory Menu by pressing the Factory button on the remote. Then the key's function on the remote handset is like as following table 1, You can adjust the parameters of the 50Hz(100i) Geometry. Then change the input signal to 60Hz, and repeat adjusting the parameters of the 60Hz Geometry. Repeat pressing the Factory button to exit the Factory Menu.

Table 1

Key	Geometry Adjustment Menu		White Balance Menu state
Mute	Mute		
AV	TV/AV		TV/AV
TBright	Auto Scan	Auto search programmer	
Standby	Standby	Standby	Standby
1	AGC	RF AGC Adj.	RCUT-
2	OSDP	OSD Position	RCUT+
3	HPS	Hor. Position	RDRV-
4	VP50	Vertical Center	RDRV+
5	HIT	Vertical Amplitude	GCUT-
6	VSC	Vertical S-correction	GCUT+
7	VLIN	Vertical linearity	GDRV-
8	BOW		GDRV+
9	WID	Horizontal Amplitude	Sub-brightness-
0	DPC	Pincushion correction	Sub-brightness+
_ / _ _	PARA	Parallelogram correction	BD-
I/II	KEY	Keystone correction	BD+
Swap	UCNR	Up corner correction	
Sleep	LCNR	Low corner correction	
Display	EHT	EHT	
Game	TXTHPS	Teletext Hor. Position	
Menu	TXTVPS	Teletext Vert. Position	
P.P	Picture Preference		Picture Preference
S.P.	Sound Preference		
OK	Save Factory default		Save Factory default
V+	Adjust Increase		Adjust Increase
V-	Adjust Decrease		Adjust Decrease
P+	Select previous item		Select previous item
P-	Select next item		Select next item
TXT			
Freeze			
Mode			Bri/Contrast
Zoom	Color system direct key		
Index	Sound system direct key		
Hold			
Reveal	Retrieve Geometry Default Value		Retrieve WB Default Value
Mix			
Factory			
Burn			
Design			
BusOff			

**Focus Adjust**

- Press key "P.P." on the remote handset to set the TV on NORMAL mode.
- Adjust knob "FOCUS" on FBT to make the picture on the screen to be the most distinct.

**G2 alignment:**

Press the Design button on the remote handset and hold about 4seconds to enter the Designer Menu, use the P+ or P- key to select the item of G2A-alignment. Then press the V+(right cursor), then the screen be display INCREASE or DECREASE or OK. If INCREASE or DECREASE be displayed, please adjust the SCREEN button on the FBT until the screen displayed is OK. Repeat press the Design button to exit the Designer Menu.

**White-Balance adjustment:**

- Press the Factory button on the remote handset two times to enter White Balance adjust mode, this moment, the key's function on the remote is like as Table 1.
- Adjust Red Gain (RDRV), Green Gain (GDRV), Blue Gain (BDRV), DC Red (RCUT), DC Green (GCUT), DC Blue (BCUT) until the white-balance meet the requirement.
- Press Factory button to exit White Balance adjust mode.

**Horizontal/Vertical center adjust:**

- Receive MONOSCOPE PATTERN.
- Enter Geometry Adjust mode;
- Use remote to get Hor- Position (HPS) item, use VOL+/- buttons to set Hor-center of the picture to meet the standard requirement.
- Use remote to get Ver.- center item, use Vol+/- keys to set ver-center of the picture to meet the standard requirement.

**Vertical amplitude adjust:**

The set have to adjust 50Hz and 60Hz single Ver-amplitude.

- Enter Geometry Adjust model;
- Input 50Hz signal, adjust HIT until amplitude meet the standard.
- Input 60Hz signal, adjust HIT until amplitude meet the standard.

**Sub-brightness adjust:**

- Receive GREY SCALE/COLOR BAR pattern.
- Press the P.P. key to select the state of "normal".
- Enter Service White Balance mode.
- Get Sub- Bright Min tem. Press VOL+/- buttons to make the second darkness bar of GREY SCALE part loom. Press
- Exit this mode by press FACTORY key.

**E-W correction and Hor.-wide adjustment:**

- Press P.P. key on remote unit to set TV on normal state.
- Enter Geometry Adjust mode;
- Input a 50Hz crosshatch pattern signal to the TV set ;
- press 9 key on remote to get WID item, press VOL+/VOL- to make the crosshatch pattern just be full of the CRT screen;
- Press "0" key on remote unit to get DPC item, then press VOL+/VOL- key on remote carefully to make the vertical lines of the pattern become straight as possible.
- Press "-/+" key to get PARA item, then press VOL+/VOL- key to make the picture like as square;
- press "AV" key to get KEY item, press VOL+/VOL- key carefully to make the picture on the screen is same width from top to bottom.
- Press "SWAP" key to get UCNr item, then press VOL+/VOL- key carefully to make the vertical lines on the top corner of CRT screen become straight.
- Press "SLEEP" key to get LCNr item, then press VOL+/VOL- key carefully to make the vertical line on bottom corner of CRT screen become straight.
- Input a 60Hz crosshatch pattern signal to the TV set;
- Repeat the above step ~ ;
- Exit Geometry Adjust mode by press factory key on remote unit.

**EHT adjustment**

- Press "P.P." key on remote unit and set TV on normal state.
- Enter Geometry Adjust mode;
- Input a 50Hz crosshatch pattern signal to the TV set
- Adjust EHT till the level width same as diamond signal width.
- Input 60HZ diamond signal
- Input 50HZ white diamond signal, and adjust EHT till the level width same as diamond signal width
- Exit geometry adjust mode.

**Teletext TV amplitude horizontal and vertical adjust**

- Receive PAL B/G signal
- Press TV/TXT on remote control enter into teletext mode
- Press T.BRI on remote control till teletext TV obtain brightness.
- Press "FACTORY" button into teletext mode, press P+ or P- to choose teletext mode, HIT, TXTVPS or TXTHPS.
- Select "HIT" item press VOL+/VOL- button to make vertical amplitude of teletext TV picture reach standard
- Select "TXTVPS" item press VOL+/VOL- button to make vertical location of teletext TV picture reach standard .
- Select "TXTHPS" item, press VOL+/VOL- button to make horizontal location of teletext TV picture reach standard .
- Press "FACTORY" button to retreat from teletext geometry adjusting mode.



### Burn button's introduction

"aging state" is an independent estate ,the purpose is to make CRT become aging in valid and insure the correct adjustment for white balance.

The method of entering "aging state" - first press "BURN"button into geometry adjustment menu.

The method of exiting "aging state"

- press "burn button" for 2s to exit.

- set aging time and it will exit the state after set time. pretermite is 30 minutes,max is 2 hours and can be adjusted under DESIGN MENU

Sound is set to quiet state, brightness contrast and color set to mediate value when TV enter into aging state.Bule screen black background function is switched off,and red letter "M" displays on the top left corner of screen.

In the "aging state" ,any other buttons on remote control is unvalid except "BURN"button.(avoid carelessly pressing standby button enter standby mode or pressing burn button into aging state). Even if power on again after power off ,but TV is still under aging state ,and it can exit this state till after set time of aging time.

### Bus off state's introduction:

Press"FACTORY"key ,first enter white balance menu ,then press"BUS-OFF"enter BUS-OFF"state.In this state, CPU will emit I2C bus.This time,I2C bus will be under outer computer control in order to obtain automatic adjustment of white balance function and automatic adjustment of geometry parameter function.

### DESIGN MENU's introduction:

Press "Design" button for 3s enter"Design"menu,this menu have the following structure system,and the menu will display in order by pressing "DESIGN" button. Some functions have several chioses,different function choices adapt to different customers and distribution areas.

### Description of the Function option :

RF SECAM L/L' enable/disable:

Option in Designer menu.

Game on/off & select:

Option in Designer menu.

World wide clock on/off:

Option in Designer menu.

Calculator on/off:

Option in Designer menu.

Calendar on/off:

Option in Designer menu.

OSD Language display selection:

Option in Designer menu.

Blue stretch near white on/off:

Option in Designer menu.

4:3/16:9 for CRT:

Option in Designer menu.

AV2: (VIDEO+RGB)/S-VIDEO:

Option in User menu.

LIST mode of TEXT:

Option in Designer menu.

CTI on/off:

Option in Designer menu.

Chroma Coring on/off:

Option in Designer menu.

Comb filter on/off:

Option in Designer menu

Contrast Enhancer off/Black stretch/White stretch/Grey Stretch/Grey StB&W/Auto:

Option in Designer menu.

Green Boost on/off:Option in Designer menu.

Smart Volume on/off:

Option in Designer menu.

Blue stretch on/off:

Option in Designer menu.

Teletext language region option 0—6:

Option in Designer menu.

STV8216Detect Auto/off

Option in DESIGN MENU.

Auto: After select FM Mono by pressing I/II button ,then TV signal is from faint to distinctive ,8126 will identify whether have Nicam,and it will switch into Nicam Stereo automatically if have.

Off: After select FM Mono by pressing I/II button ,then TV signal is from faint to distinctive ,8126 will identify whether have Nicam broadcast, and it will be under FM Mono state all the time.

Tuner type option KSH148EA

Option in DESIGN MENU

SP-Y5ED

XG-6F6126CWA

XG-6FT126J

Mono In On/off

Option in DESIGN MENU

On: When under FM / AM Mono use TDA9886 volume output

Off: When under FM / AM Mono use STV8216 inner decode output

Auto cutoff Loop

Option in Designer menu.